



AZ CORECUTIVE SECRETARY

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CARL J. KUNASEK COMMISSIONER

ARIZONA CORPORATION COMMISSION
June 2, 1998

Commissioner Carl Kunasek Arizona Corporation Commission 1200 West Washington Phoenix, Arizona 85007

Dear Commissioner Kunasek:

The attached pages were inadvertently omitted from the testimony of Dr. Kenneth Rose. Please insert the attached pages into proper order.

Sincerely,

Paul A. Bullis

Chief Counsel, Legal Division

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costs and how should those costs be calculated; and issue #5, should there be a limitation on the recovery time frame for "stranded costs."

Q. Please state your view on the existence of a regulatory compact.

A. The term regulatory compact, properly understood, does not refer to an implied, implicit, or explicit contract. Properly understood, the term regulatory compact is a metaphor that refers to the nature of regulation of a regulated monopoly. It does not create binding contractual obligations on the state of Arizona or the Commission. The Commission uses the "fair value" of the utility property in setting rates. The fair value method of valuation is meant to mimic competitive markets. It is appropriate, therefore, that as competition becomes available in the generation sector of the electric industry, that rates based on the competitive market would provide an accurate and efficient valuation of the fair value of the generation plant. This response is based on a non-attorney's understanding of what the regulatory compact is and is consistent with the Arizona Corporations Commission's position in retail electric competition.

The Arizona Corporation Commission Staff (the Staff) is in explicit disagreement with Sean R. Breen when he states on page 3 that the utility's willingness to underwrite long-term investments and commitments relied on a regulatory regime which provided the utility with an ability to recover its costs and earn a reasonable return on and of its investments through Commission-prescribed rates. As social policy changes in light of changed circumstances, the so-called regulatory compact also changes. To the extent that the regulatory compact exists, not as a contract, but solely as a metaphor of how we regulate regulated utilities, a utility is only allowed an opportunity to recover its costs and earn a reasonable return on and of its investments.

The Rules and the method of stranded cost recovery that is suggested elsewhere in this testimony do not break or violate the regulatory compact, but rather redefine and modify it as a matter of state public policy during a transition period to greater competition in the electric industry. In other words, the metaphor of the social compact is now appropriately being rewritten by the Rules. Nevertheless, the opportunity to recover costs and earn a reasonable return on and of its investments still exists under the Rules. We must be clear that the social compact is not now, nor has it ever been a contract guaranteeing the utility a perpetual monopoly, freedom from competition,

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for a utility's services equivalent to a competitive market. This is the reason for after-the-fact reviews of utility decisions— to give utilities an incentive to make careful decisions similar to a competitive firm and protect ratepayers from rate-base padding and shoddy management. This was intended to be a consumer safeguard, not an unfair standard of perfection imposed on the company.

Q. Did the obligation to serve limit affected utilities' investment discretion?

The Staff believes that an obligation to serve is not sufficient, in itself, to constitute proof of A. a lack of utility discretion. This obligation was not an obligation imposed by the State that bound ratepayers to the utility. The Staff believes that there never was nor is there now a concurrent obligation to buy on the part of customers of the utility. If there had been, utilities would have had the right to charge industrial customers when they switched to self-generation or required residential or other customers that relocated to a new area to pay for their "share" of their "obligation." Another obligation utilities had in the state is an obligation to charge just and reasonable rates. As noted the Staff finds that a competitive market is a superior means to determine what just and reasonable is and what is in the public's best interest. The Staff does not believe that because an investment is placed in rate base or a cost is allowed to be recovered, automatically means that recovery is required.

This does not mean that all claims for recovery should be rejected by the Commission. Rather, it means that the Commission has the ability and authority to examine investments and costs and decide whether recovery is warranted based on the history of an asset and possible future effects on the development of a competitive generation market. For example, the Commission should consider whether the utility had the discretion when deciding on a particular investment or whether it was imposed on it by the state. In general, however, but not always, utilities were given discretion on how to meet demand. If it could clearly be shown that a utility lacked decision making discretion, then recovery may be appropriate.

In effect, Dr. Gordon is asserting that a shareholder's investment in a utility is riskless. By observation alone, this can be shown to be simply incorrect. First, the fact is that shareholders have been penalized in the past for bad investments. It is central to effective regulation that regulators monitor and disallow recovery of costs that are imprudent or not "used and useful." During the late nineteen-seventies and early nineteen-eighties, there were many disallowances of utility costs, primarily nuclear investments. This is the means that regulators developed to mimic a competitive outcome and avoid deliberate rate-base padding or simple lack of vigilance by utility management.

A second observation is utility cost-of-capital. If the capital market believed that utility investments were riskless, then the cost-of-capital of utilities would approximate the U.S. Government's Treasury Bill rate. In fact, utility costs-of-capital today vary in a similar way that competitive firms vary with respect to expected future competitiveness of the firm. Investors judge the future relative competitiveness of utilities among many other factors (other factors include future interest rates, inflation, and technological change) that will affect the financial health of the company and the soundness of their investment. This judgment is reflected in the cost-of-capital that results in the capital market. This suggests that utility investors are compensated for the risk that some investments may turn out to be poor decisions.

Indeed, it is a criticism of traditional ratebase/rate-of-return regulation that it is asymmetrical, the opposite of Dr. Gordon's assertion. The argument was that if the utility makes a good investment, investors are limited to received only the allowed rate-of-return. If the investment turned out to be a bad one, investors were penalized.

Dr. Gordon is correct when he asserts that the treatment of investment risk and reward in a competitive market is symmetrical. However, the Staff believes that allowing uneconomic cost recovery will result in less symmetry of risk and reward in the developing competitive market. The reason for this is explained in more detail in the answer to the question on the effect that recovery will have on the development of a competitive market.

A. Lawrence Kolbe and William B. Tye, "The *Duquesne* Option: How Much 'Hope' Is There for Investors in Regulated Firms?" 8 *Yale Journal on Regulation*, 113 (1991).

it is not known exactly how the generation market will develop, and hence the extent of the uneconomic cost problem is likewise unknown.

Q. How are uneconomic cost treated in a competitive market?

A. "Stranded costs" or uneconomic costs of a utility is exclusively a regulatory phenomenon. There is no direct analogy to private and unregulated markets or any economic textbook definitions of these costs with suggestions on how they should be treated. In a competitive market, any obsolete or uncompetitive plant and equipment costs (or sunk costs) are disposed of at market value, and any difference between market value and book value is absorbed by the firm's shareholders or owners (and, to a limited extent, taxpayers because of the loss can be used to offset taxable income). This results in lower earnings, which the shareholders or owners of the firm are willing to endure if there is an expectation of earning an adequate return on their investment later. Alternatively, the firm simply goes out of business and its assets are sold off.

Obviously, many do not receive the full amount owed or invested. This is the risk they undertook to earn a return on their investment. These costs cannot be passed through to customers since, in the competitive market, firms can only charge the market price. A firm that charges a price above market price will lose customers and be driven out of business by more efficient firms. Investors, of course, only invest if they believe that they will receive the expected return. Thus, there is a direct relationship between the return on investment and the probability of a loss or the investment's relative risk. A relatively higher return is required for riskier investments, while lower risk investments pay a lower return.

In a dynamic competitive market economy, assets become obsolete and are abandoned regularly. An important function of a market economy is that inefficient and obsolete practices and firms are either eliminated and replaced with more efficient and superior firms or forced to redirect their efforts to become more efficient and better managed. Overall this results in society's limited resources being used in the most productive manner. This limits waste and strengthens the overall economic health of the country. Rarely is there a third party to "bail out" a firm that faces possible losses and financial ruin. Indeed, doing so only hampers this screening process of a market economy. This process is inhibited when recovery of uneconomic costs is allowed. The result is

costs reduces the incentive to mitigate and reduce uneconomic costs. This lack of incentive is often referred to as the moral hazard problem. A moral hazard can be created when, for example, a government agency, usually inadvertently, encourages firms or individuals to act in a manner that is not in the general public's best interest. Assurance of recovery of uneconomic costs creates such a hazard. Simply put, a firm that is given assurances that recovery will be forthcoming will not be as adamant about reducing costs and minimizing potential uneconomic costs. It will also be less aggressive about expanding into new market areas or retaining existing customers if it believes that it will be compensated for its losses.

Finally, recovery of uneconomic costs can distort the competitive market because of an asymmetry of risk and reward that is created. In contrast to Kenneth Gordon's testimony (lines 18 through 19, page 8), with recovery, an affected utility is compensated for investments that turn out to be uneconomic; but for utilities that have competitive gains, there is no mechanism being proposed to pay the gains back to ratepayers. When calculating uneconomic costs, it is good practice to determine the *net* amount by offsetting losses with the gains (see answer to question 3). However, if a utility has a net gain, there is no mechanism to return it back to ratepayers. In effect, only losses are compensated. For consistency and symmetry in the future competitive generation market, the Staff is not proposing such a mechanism be created. This is to point out the asymmetry that recovery causes and note that it is more likely that it could turn out "heads the utility wins, tails customers lose."

Combining these factors suggests that recovery of uneconomic costs can distort the competitive market. In general, the more that is recovered, the greater the impact on the market. For these reasons, the Staff recommends that the Commission consider this impact on the market when it makes its decision whether or how much uneconomic cost to allow.

- Q. Some have argued that <u>not</u> allowing uneconomic cost recovery will harm economic efficiency. Can you reconcile that claim with your comments?
- A. This is thought to be a consequence of "uneconomic bypass." Uneconomic bypass is said to occur when a customer chooses a supply option that is not the lowest cost in terms of long-run marginal cost. This may arise when customers compare the price of an alternative option that is

And third, even if it does occur, it has a minor effect on overall efficiency when compared to the gain in dynamic efficiency induced by a competitive market. To prevent uneconomic bypass from occurring, the surcharge would have to be set exactly right so that the "correct" supply option is selected. Given the quickly changing nature of a competitive market and the difficultly in determining the correct amount of a surcharge, it is doubtful that an administratively determined surcharge would ever be correct. Moreover, trying to correct an unlikely and relatively small possible efficiency loss from uneconomic bypass is more likely to result in much larger efficiency losses by limiting alternative suppliers' penetration into the generation market.

In short, there will likely be more harm done to the development of a competitive generation market from recovery of uneconomic costs than the possible harm (if it were to occur) from uneconomic bypass.

Q. Please explain your perspective on economic efficiency in more detail.

A. Any attempt to put in place a mechanism to prevent uneconomic bypass will only impede the market's ability to reduce production costs to the minimum possible level. In effect this becomes a self-defeating process; where the process to avoid uneconomic bypass prevents from being met the very condition that it was designed to address. In other words, policies designed to avoid static losses from possible uneconomic bypass only sacrifice the longer-term and more important goal of fostering a dynamic competitive market.

This can be explained by considering that there are two general types of economic efficiency: static efficiency and dynamic efficiency. Static efficiency is achieved when power is generated by the lowest cost sources. Thus, static efficiency requires only economic bypass of the utility's system and no uneconomic bypass. This assumes that the utility's and the alternative supplier's marginal costs are minimized and remain unchanged. In this case, prices and the utility's and its competitors' marginal costs do not shift from their positions and are, assumed to be at minimum costs. However, this is not very realistic since it is expected that the competitive generation market will be very fluid and dynamic.

Because of regulation, utilities are likely to have cost inefficiencies. Over time it should be expected that costs would change so that rates and marginal costs will be expected to shift. This can

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— attempts by the regulator to "correct" for static inefficiencies would only harm long-run overall efficiency.

Over time, it should be expected that a competitive market would lead to the utility's marginal costs being reduced to the market price. This market price would reflect a combination of the marginal costs of utilities, alternative suppliers, and so on. To be dynamically efficient, it is required that the market price of electricity be the marginal cost of all suppliers. This also has the effect of reducing the amount of uneconomic costs over time.

Q. Have others discussed this issue of economic efficiency?

A. Yes. Kahn separates the concepts of static and dynamic efficiency and examines a case where dynamic efficiency gains may outweigh static efficiency losses. In a discussion of the merits of allowing a utility to charge marginal cost for a service, he points out that while it may be efficient "in the static sense" to allow the utility to drive out its rivals, there may be some "dynamic loss if the result is the elimination of those competitors." He adds that preserving the competitors (by setting a price above marginal cost) would provide a "stimulus" to the utility's performance and "might in the long run contribute sufficiently to a greater and more varied innovation, to continual improvements in the industry's service and efficiency to outweigh the static welfare loss involved in keeping it [the competitor] alive." However, restricting competition in this way, he states, would require "a very heavy burden of proof." Of course, for electric utilities at this time, the debate on uneconomic costs is not whether competitors should be supported, but whether the utility should be allowed to recover uneconomic costs. Because, allowing recovery would restrict the competitive outcome, the "heavy burden of proof" is on those who argue for recovery. Restricting the market's outcome (and its dynamic benefits) by supporting uncompetitive utilities (in the interest of static efficiency) only serves to delay the benefits of competition for consumers and hobbles potential

Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions*, *Vol. I, Economic Principles* (Cambridge, MA: The MIT Press, 1988), 176. This discussion concerned AT&T's ability to, at its long-run marginal cost, drive out most or all rivals.

^{4&#}x27; Ibid., 176-77.

Q. It has also been asserted that allowing recovery of uneconomic cost does not distort a competitive market. Do you agree?

A. No. Typically when this claim is made, it is already presumed that recovery will be allowed (or should be allowed). In this view, the collection of the uneconomic costs through a customer surcharge is simply like a tax that is collected from all suppliers. This will reduce the amount of the quantity supplied from alternative sources, just as a tax will raise the supply schedule and reduce the equilibrium quantity and raise the price. It will in fact change the outcome from what would occur under competition without recovery. The proper comparison, therefore, is how the competitive market is changed compared to a market with no recovery. When it is presumed that recovery must be granted to start with, this is a prior assertion based on the analyst's view that recovery of uneconomic costs is justified; it then ceases to be an analysis of just economic efficiency.

Q. Is there an alternative to simply calculating the amount of uneconomic cost and allowing some portion of recovery?

A. The term "stranded cost," while now commonly used, is a misnomer. What is actually meant by the term is to determine the amount that the utility's generation costs exceeds the market price for generation. An estimation of the production loss due to competition is usually attempted before the start of retail competition for generation. Since, at this point in Arizona, there are currently no actual "stranded costs," the focus is on predicting utility loss in the future competitive market or *potential*stranded costs. Another aspect of the term "stranded cost" that can also be misleading is that it suggests that costs are fixed and permanent and that the utility can do little to reduce the potential competitive losses.

A more appropriate way to describe these competitive losses and the revenues a utility will be allowed to collect from customers is "transition revenues." When the focus is shifted to the temporary revenues the utility will receive, the emphasis is shifted to determining the amount necessary to meet specific criteria set by the Commission, if the Commission decides to allow recovery. For example, the Commission could determine the amount necessary to maintain the financial stability of the utility. This may be an amount to pay the company's debts and, perhaps, a reduced return. This changes the focus from rate base and expense items to the maintenance of the

Q. What costs should be included as part of "stranded costs" and how should those costs be calculated?

A. There are three general types of "stranded costs" that states have been considering when examining electric restructuring. They are: (1) costs related to the generation of electricity, or "production costs," (2) "regulatory assets" that are currently carried on the utility's books, and (3) public-policy obligations that a utility may have been required to support by state or federal law or regulation. For most utilities in the country, the first category is the largest. Unfortunately, it is also the most difficult to calculate with precision. The second two categories of stranded costs are usually determined administratively by examining the utilities books, contracts, and public policy obligations. It is the Staff's view that the third category of uneconomic costs is not a major problem in Arizona.

There are several ways to estimate potential production "stranded costs." While no method is ideal, they can be evaluated in terms of tractability and ability to evaluate the results. The two basic forms of estimation are asset-by-asset or "bottom-up" approach and the lost revenue or "top-down" approach. The bottom-up approach can use either an estimate of the market value of the utility's assets or assets can be sold at auction to determine their value. Estimating the market value for all generating assets is time consuming and very speculative. Determining the value in an auction may provide a more unbiased value, but would, of course, require divestiture of utility generation assets. The bottom-up approach requires considerable investment in time, both in terms of time to conduct the analysis or in terms of time needed to sell the assets and resolve the issue.

The top-down approach projects the net present value of the difference between the generation revenues that would be received if cost-based regulation continued and the projected revenues expected with competition. Obviously, this also requires a great deal of speculation and numerous assumptions as well, but the data requirements are less than the bottom-up approach. Another advantage to the top-down approach is that impacts from changes in the assumptions on the utility's system as a whole can be seen more readily. Also this method, by definition, nets the above and below market assets when it is calculated (since both market and regulatory total revenues are

- Profit— when calculating the regulatory revenue stream, if there is a return on investment, such as assuming the current level remains the same throughout the period, it should be stated. Alternatively, this may be implied in the discount rate; if so, this should also be explained.
- Future variable costs—it is expected that affected utilities will be able to reduce their variable production costs over time. This is because, as is often assumed, utilities where not always as vigilant in controlling cost as under cost-based regulation as is likely to occur in a competitive market. Reasonable assumptions of variable cost reductions should be included in the projections and explained.
- Future capital carrying costs— while sunk costs that have already been incurred cannot be reduced, the carrying cost of that capital may be reduced through refinancing of debt or replacing higher cost equity with debt (assuming that a higher level of debt will be permitted with competition).
- Capital additions— any additions to the existing plant that is added, such as refurbishment of existing plants, should be described in detail. This should not include any new plant additions since these cannot be described today as "stranded."

In addition, any other important assumptions that the company deems important should also be discussed explicitly and in detail.

Since competition will be phased in over four years, the estimate of uneconomic costs should only reflect the limited exposure to a possible loss that the company will have during the phase-in period.

Q. Please describe the Staff's position on the recovery of regulatory assets.

A. Regulatory assets categorized as post-in service Allowance for Funds Used During Construction (AFUDC) should generally be classified as production costs for purposes of the top-down approach. AFUDC is indistinguishable from other plant costs. Revenues from plant are production revenues or are achieved through mitigation efforts. Therefore, the collectability of AFUDC should be bound up in the overall future competitiveness of the particular plant to which the AFUDC charges are booked.

As was pointed out by Kissinger on page 4 of her testimony, Tucson Electric Power has regulatory assets of \$94 million as of December 31, 1996. These regulatory assets represent certain excess capacity costs associated with Springerville Unit 2 that are deferred costs. Although there is a regulatory asset on Tucson Electric Power's regulatory books, there is not a corresponding asset reflected on Tucson Electric Power's financial books. The Company has already taken a financial write-off of these assets. This asset too is a production asset. Since the Company here has already

period, be five years or less.

Costs, such as nuclear decommissioning costs, which will continue past this transition period, are included in System Benefits Charge calculations and will not be considered part of stranded costs. Staff agrees with APS that nuclear fuel disposal costs should also be part of the System Benefits Charge and not stranded costs.

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- Q. How and who should pay for "stranded costs" and who, if anyone, should be excluded from paying for stranded costs?
- A. The allowed transition revenues should be recovered through a "non-bypassable" customer or "wires" charge. This could be in the form of a surcharge added to the distribution charge. This surcharge should be a separate item on customers' bills. To the extent that uneconomic costs or transition revenues are allowed, distribution customers of the affected utility should be assessed the surcharge during the transition period.

Question 7

- Q. Should there be a true-up mechanism and, if so, how would it operate?
- A. The question of whether there should be a true-up mechanism depends on how the Commission addresses the recovery of uneconomic costs. If the Commission decides to allow recovery of all uneconomic costs, for example, there would certainly be a need for a true-up mechanism. Since there will inevitably be errors in the forecast of uneconomic costs, a true-up is needed to reconcile the difference between the actual amount and the amount recovered from customers. This prevents customers from paying too much. However, the need for a true-up diminishes as less recovery of uneconomic cost is allowed. Therefore, the closer the amount allowed is to the estimate, the greater the chance that the utility will recover more than the actual amount of uneconomic costs and the stronger the need for a true-up. If the Commission allows a portion of the uneconomic costs, then there is diminished need for a true-up mechanism.

Another consideration is the administrative burden. A true-up mechanism will require filings by affected utilities and proceedings to determine both the actual amount of uneconomic costs and

ensure that the utility does its best to sell the power at its highest possible value so as to mitigate the customer's stranded cost liability?" Related to the decreased incentive to reduce costs already discussed, if it is stated up front that utilities will be allowed to recover all uneconomic costs, then it probably cannot be practically ensured that all is being done to reduce the affected utility's uneconomic costs. The reason is that there is no realistic or practical way for any commission (or any other state agency) to examine all available utility costs and options. The utility knows its system, assets, and options better than any state agency can, without spending a great deal of time and money to find the information itself.

Moreover, it is possible that affected utilities, when given assurance up-front, will become more interested in maximizing their uneconomic costs by overstating the amount of uneconomic costs and putting forth little effort to reduce it.^{12/} For example, it is not unusual to see utility forecasts of market prices much lower than independent analysts' projections which, of course, result in higher uneconomic cost estimates.^{13/}

Q. Are there any other issues related to stranded cost the Staff would like to raise?

A. Yes. The final issue raised here is securitization of uneconomic costs. This is a technique that has been adopted by at least six states so far. The Staff, however, does not believe that this technique is in the best long-term interest of Arizona customers or the development of a competitive market since it results in a significant transfer of risk from the utility to customers.

Briefly stated, securitization refers to the creation of a financial security that is backed by a revenue stream pledged to pay the principal and interest of that security. This device provides utilities an up-front, lump-sum payment from the sale of the security or bond. Securitization requires the creation of a transferrable property right to collect the utility's uneconomical cost from ratepayers

FERC, Notice of Proposed Rulemaking, "Recovery of Stranded Costs by Public Utilities and Transmitting Utilities," 222-23.

Robert J. Michaels, letter to the editor, *The Electricity Journal*, 8, no. 2 (March 1995): 86.

Compare, for example, the price forecasts by Commonwealth Edison with the Illinois Commerce Commission's or the U.S. Department of Energy's forecasts.

however, in a holding company structure the utility can simply transfer the cash to the holding company. This money can be used in any manner the holding company desires, including using it to restrict competition. This would be another special advantage granted to the incumbent utility and could be anticompetitive.

- Q. Does this conclude your testimony?
- A. Yes.